

## Overview of the Current Utility Business Model in Minnesota

*Prepared by Xcel Energy for the e21 Initiative*

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## OVERVIEW

Minnesota electric utilities operate in a regulated market under a cost-of-service (or rate-of-return) regulatory framework, through which regulators strive to balance the interests of customers and utility shareholders. Under a cost-of-service approach, the prices customers pay for utility services are based on the utility's cost of providing those services, including a reasonable rate of return. The basic principles of COSR are to: 1) recover costs that were prudently incurred and necessary for the provision of safe and reliable utility services, and 2) provide a reasonable opportunity to earn a rate of return that is sufficient to attract capital on reasonable terms to finance capital investments.

The total cost of service or "revenue requirement" is established through the rate case process. The revenue requirement includes fixed and variable costs of providing service, as well as an authorized rate of return. Fuel and purchased energy costs are passed directly to customers through the Fuel Clause Adjustment and are not a part of the revenue requirement calculation.

At a high level, rates are set by dividing the revenue requirement by the sales assumed in the test year, which produces a price per each kWh sold. Thus, how much electricity a utility sells will determine the extent to which its fixed costs and approved level of profits are recovered. If actual sales are below the level assumed in the test year, all else being equal, the rate has been set too low and the utility will not recover its approved revenue requirement nor earn its authorized return. Conversely, if actual sales exceed assumed test year sales, the utility collects revenue in excess of its approved revenue requirement.

In general, under the COSR model, a utility can increase its earnings in the short term by increasing sales revenue and reducing operating expenses. Over the longer term, a utility's earning growth is largely driven by increasing sales and customers and investing in new capital assets (*i.e.*, growing rate base). The incentive to increase sales in order to increase earnings is called the "throughput incentive."

## KEY CONCEPTS

**Regulatory Compact** – In exchange for being granted an exclusive service territory, the utility accepts the responsibility and obligation to serve all customers in the territory under a rate regulation framework. The utility is obligated to supply service efficiently, but has the right to recover prudently-incurred costs, including an opportunity to earn a return equal to its market-determined cost of debt and equity capital. It is the cost of common equity (ROE) that is most debated in a rate case, as it is not directly measurable. The regulatory compact does not guarantee the profit level, only a fair opportunity to earn an approved profit level once rates are determined. Because the utility can retain cost savings between rate cases, there is an inherent incentive to operate efficiently and manage costs.

**Rate Case** – Utilities typically need to seek rate adjustments through a rate case when costs have risen and the revenues collected no longer cover the cost of building, operating and maintaining the system. A general rate case is a quasi-judicial procedure designed to allow input from affected parties and produce rates that are just and reasonable. As part of the rate case process, regulators evaluate the prudence of costs for inclusion in rates. As part of the proceeding, the Commission determines a new rate base, a new level of operating expenses, a new rate of return, and new rates for the customer classes. There is typically a high level of scrutiny and detailed review of historical and forecasted costs.

**Test Year** - The fundamental purpose of a test year is to establish a fair and representative level of costs and revenues that reflect normal utility operations for the time period the new rates

are likely to be in effect. Minnesota regulation relies on a future (or current) test year. The test year begins after the rate case is filed and partially overlaps with the evaluation of the rate case. This allows more current information to be incorporated as available.

**Revenue Requirement** – The Revenue Requirement is the total amount of revenue needed to serve customers and provide a reasonable opportunity to earn a fair rate of return on its investment, given specified assumptions about sales and costs. The costs included in the ratemaking process are those incurred during the test year or years, which provide a snapshot of ongoing utility costs. The basic revenue requirement equation is shown below.

$$TRR = TC = [RB - D]ROR + OE + d + T \quad (1)$$

Where:

TRR = total revenue

TC = total cost

RB = rate base or value of capital

D = accumulated depreciation

ROR = weighted average cost of capital equals the cost of equity (profit to owners) multiplied by the percent of equity used to fund the firm plus the cost of debt (average interest rate paid on bonds) multiplied by the percent of debt used to fund the firm

OE = operating expenses

d = annual depreciation cost

T = taxes.

**Rate Base** - Rate base primarily reflects the capital expenditures made by a utility to secure plant, equipment, materials, supplies and other assets necessary for the provision of utility service, reduced by amounts recovered from depreciation and non-investor sources of capital. It is the investment base on which the utility earns a return.

### The Rate Base

<i>Total Plant In Service At Original Cost</i>	
- Accumulated Provision for Depreciation	
<hr/>	
<b>= Net Plant in Service</b>	
+ Working Capital Allowances	
- Accumulated Deferred Taxes	
+/- Other Adjustments Approved by the Commission	
<hr/>	
<b>= Rate Base</b>	

Net utility plant in service represents the Company's investment in plant and equipment that is used and useful in providing retail electric service to its customers, net of accumulated depreciation and amortization.

Traditionally, utilities have only been allowed to add investments to rate base once they are completed and providing service to consumers. In Minnesota, utilities are allowed to include

*construction work in progress* (CWIP) in rate base with the cost of financing during the construction period deferred through the recognition of *allowance for funds used during construction* (AFUDC). This allows a return on the cost of capital during construction, while deferring the accumulated cost of invested capital until after the plant is in service, when it is capitalized and recovered over the life of the asset.

**Return on Equity** – The approved ROE is usually one of the most contested issues in a rate case. It represents the amount the utility must pay an equity investor in order to use the investor’s money, just as interest on debt represents the cost of borrowing from a bond investor. In other words, it is the return that the utility must offer to investors to get them to invest in the company. Several methods are used to estimate the cost of equity, each based on economic theory and decades of research.

**Cost Allocation** - With the revenue requirement determined, the Commission must then determine how the customer classes will contribute to paying for the revenue requirement. A class cost-of-service study calculates the cost responsibility of each class and forms the basis of the cost allocation.

**Rate Design** – Rate design typically refers to the design of the retail rates paid by specific customer classes, including customer charges and energy and demand charges. It is how the rates are structured for each class to recover the revenue requirement.

**Riders/Trackers** - These mechanisms allow cost recovery outside a general rate case proceeding for specific kinds of expenditures over defined periods. They generally involve a method for tracking specific cost categories, coupled with some form of flexible rate adjustment mechanism (e.g., a rate rider) to generate the required revenues. These special mechanisms are variously referred to as automatic adjustments, cost trackers, and rate riders.

## KEY PRINCIPLES

- *All regulation is incentive regulation.* All forms of regulation incent a utility to take certain actions and make certain choices. Under cost-of-service regulation, utilities have an incentive to take actions to maximize shareholder returns, while meeting regulatory requirements.
- *Prohibition on single-issue ratemaking.* Regulation is designed to focus on the total net cost of service to avoid piecemeal or single-issue ratemaking. That is, regulators are generally required to review all costs included in the revenue requirement to assure that the net result includes all cost increases and decreases as well as productivity changes.
- *Prohibition on retroactive ratemaking.* The revenue requirement and rates are set prospectively in order to attempt to match the costs that are embedded in the rates with the time period in which the rates are in effect. There is no attempt to rectify past outcomes by making up for lost or excess profits. Conceptually, prices are intended to reflect the costs of the utility at the time service is provided.
- *Prudent investment standard.* Prudence is generally defined in terms of the “reasonable manager” standard. The standard does not allow the regulator to substitute its judgment for management judgment; rather the regulator determines that, given the information known or that should have been known at the time a decision is made, the decision could have been

made by a reasonable management team (*i.e.*, prudence should *not* be a 20/20 hindsight review).

- *Used and useful standard.* In general, *used* means that the facility is actually providing service, and *useful* means that without the facility, either costs would be higher, or the quality of service would be lower.

**References:**

Regulatory Assistance Project. *Electricity Regulation in the U.S.: A Guide*. March 2011.

Edison Electric Institute. *Cost of Service Regulation in the Investor-Owned Electric Utility Industry: A History of Adaptation*. June 2012.